Army Shows Its Support for Manpower and Personnel Integration

MANPRINT Symposium is Proof Positive

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The Manpower and Personnel Integration (MANPRINT) program corrects a potentially fatal flaw in the materiel acquisition process: the lack of attention paid to soldier performance early in system design and development. As the Army continues to face reduced manning levels, the temptation to rely more heavily on technology as a force multiplier is a difficult one to resist. Experience has shown, however, that technology employed in a vacuum is not the solution. Soldiers can be overburdened by high-technology weapon systems, and force effectiveness can suffer as a result.

MANPRINT, which was initiated in 1984, focuses system design and development on soldiers and includes them as an integral part of the system.

MANPRINT emphasizes integration of six domains: manpower, personnel, training, human factors engineering, system safety, and health hazards. Each domain and its influence on soldier performance capabilities are carefully considered during all stages of the acquisition process. After a system has completed the MANPRINT process, users can readily distinguish it from one that has not been given the same consideration. The "MANPRINTed" system now includes the most critical element — *the soldier.*

In 1997, Army executives, including a MANPRINT General Officer Steering Committee (co-chaired by the Assistant Secretary of the Army for Manpower & Reserve Affairs and the Deputy Under Secretary for Operations Research) began assessing the viability and need for the Army's MANPRINT program. After a two-year thorough examination, they determined the MANPRINT program is indeed an essential part of the Army's acquisition strategy, proven to reduce Operations and Sustainment costs for existing and developing systems. Executive policies published currently mandate the application of MANPRINT to all Acquisition Category systems. Additionally, MANPRINT will be embedded in the Operational Requirements Document, addressed in Source Selection, and taught to Program/Project/Product Managers (PM) and leaders.

Although the Army developed and disseminated these policies, did the word really get out to the acquisition community?

If participation and attendance at the MANPRINT Symposium Aug. 18-19 is any indication, the word is out — "loud and clear." This year over 140 attendees, representing a wide array of Army acquisition activities, attended the two-day symposium sponsored by the Personnel Technologies Directorate, Office of the Deputy Chief of Staff for Personnel, HQDA. "Shaping MANPRINT for the Next Millennium" was the theme selected for the 1999 symposium.

Army Maj. Gen. John M. LeMoyne, Assistant Deputy Chief of Staff for Personnel, Department of the Army, gave the welcoming remarks and presented the following MANPRINT Achievement Awards for 1998:

- Richard Brown, Training and Doctrine Command (TRADOC) Program Integration Office for Army Battle Command System (ABCS), Fort Leavenworth, Kan., for his work on Combat Developments.
- Beverly Knapp, Human Research and Engineering Directorate, Aberdeen Proving Ground, Md., for her work on human factors associated with the National Missile Defense System.
- David Harrah, Richard Kozycki, and Luci Salvi, Human Research and Engineering Directorate, Aberdeen Proving Ground, Md., for their work on the Air Warrior Program.
- Special MANPRINT Achievement Awards to Army Col. Bruce Jette, PM-Soldier, and Army Col. Henry L. Kinnison, TRADOC Systems Management-Soldier, for their work in refining and clarifying requirements for the Land Warrior system.

Keynote Speaker

Patrick T. Henry, Assistant Secretary of the Army for Manpower and Reserve Af-

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fairs, addressed some of the major issues facing today's Army that have major MANPRINT implications.

An overarching question, according to Henry, is how does the Army respond when we are the nation's only power capable of meeting global defense and peacekeeping challenges from terrorist and rogue-nation aggressors worldwide? In addressing those challenges, another question arises — are we, in fact, a full-spectrum Army?

To ensure full-spectrum dominance, the Army needs to attract and keep quality soldiers. Currently, the Army is successful in retaining qualified soldiers, but is experiencing a 7,000-soldier shortfall in recruiting.

Because of that shortfall, a major effort is underway to enhance the recruiting program. The Army can not and should not be perceived as an employer of last resort but rather as a career of choice, rendering valuable service to the nation now and into the 21st century.

In light of the Army's recruitment difficulties, MANPRINT becomes all the more critical, according to Henry, because it targets total manpower requirements for a given system, the skills mix needed to operate that system, and any immediate or future training requirements. Further, MANPRINT brings soldiers an added level of assurance that the systems they operate and maintain are designed with them in mind.

MANPRINT in the Requirements Determination Process

Army Lt. Gen. Randall L. Rigby, Deputy Commanding General — Futures, TRADOC, addressed the system-of-systems concept reflecting the interaction and interdependence of systems, demonstrating the Army can no longer afford to acquire "stovepipe" systems.

Assuring the audience MANPRINT is firmly embedded in the Requirements Determination Process, Rigby maintained that MANPRINT practitioners must be core members of Integrated Concept Teams.

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The Army Logistics Management College offers MANPRINT training courses and the material is also included in Combat Development-related courses, as well as military and civilian common core curriculum. TRADOC guidance on MANPRINT, including its use in writing Operational Requirements Documents, is defined in TRADOC Pamphlet 71-9.[1] Rigby noted that of the 47 priority programs assigned to him by Army Gen. John N. Abrams, Commanding General, TRADOC, MANPRINT ranked seventh in priority. Clearly, from TRADOC's perspective, MANPRINT is among the "Top 10."

Medical Research Support To MANPRINT

Army Maj. Gen. John S. Parker, Commanding General, U. S. Army Medical Research and Materiel Command, addressed the relationship between medical research and the conduct of Health Hazard Assessments. As medical research identifies an issue or risk, that issue or risk can then be added to the items evaluated during the Health Hazard Assessment process. An example cited by Parker was the need for more research on the effects of non-lethal weapons. With U.S. forces increasingly involved in Operations Other Than War, the use of non-lethal ordnance must be closely monitored to ensure that lethal injuries still do not occur.

MANPRINT in Testing And Evaluation

Army Maj. Gen. Albert J. Madora, Commanding General, U.S. Army Test and Evaluation Command (ATEC), spoke on the evolution of ATEC. Outlining how MANPRINT interfaces with the ATEC Systems Teams, Madora summarized the MANPRINT payoffs, which included improved manpower utilization, lower training costs, reduced maintenance time, and better system performance. He assured the audience MANPRINT is now fully integrated into the testing and evaluation process.

MANPRINT and Digitizing The Force

Stanley H. Levine, Acting Director, Army Digitization Office (ADO), demonstrated how digitization is much more than materiel. Digitization provides a whole new way of supporting the soldier. The Army is moving to Brigade Set Fielding and the system-of-systems concept, which requires a paradigm shift.

Brigade set fielding involves issuing all of the priority 1 and 2 digitized systems a brigade receives in one fell swoop, as opposed to issuing new materiel on a piecemeal basis. This requires that the new systems are subjected not only to MANPRINT in their own right, but also to the interactive effects that such fielding is bound to have on the soldiers who will operate and maintain these new systems.

Army digitization is MANPRINT's greatest challenge, according to Levine, but

DoD photos

will be met with close interaction between the ADO and MANPRINT practitioners.

HRED's MANPRINT Approach: At a Turning Point

Dr. Robin Keesee, Director, U.S. Army Research Laboratory (ARL) — Human Research and Engineering Directorate (HRED), addressed their approach to MANPRINT and use of MANPRINT tools. When MANPRINT started, the emphasis was on developing tools. "Now that we have the tools," according to Keesee, "we need to apply them."

Robert M. Walker, the Army Acquisition Executive at the time, decreed that MANPRINT would be applied to all systems. The challenge facing ARL-HRED addresses meeting this new task with the resources presently available. Being able to apply MANPRINT practices for all new acquisition systems may call for additional resources, which will require careful monitoring.

Teaming for MANPRINT - Lessons Learned

L. Taylor Jones, Director, Targets, Test and Evaluation, Military Technologies, Inc., a former member of the MANPRINT Office staff and PM, delineated his lessons learned on teaming for MANPRINT. MANPRINT must be funded from system concept through fielding and requires the support of qualified, trained personnel. Managers of specific MANPRINT domains, according to Jones, need to do a better job of identifying costs. Additionally, MANPRINT must be embedded in solicitation and source selection/award criteria to gain the contractor's attention up front.

Panel Discussions

The first of four panels — TEAM CRUSADER — focused on managing a MANPRINT program. Representatives included Army Col. Michael Cuff, TRADOC Systems Manager, Fort Sill, Okla.; Kevin Fahey, Crusader Deputy Project Manager; and Dave Wallestad, currently the Director for Advanced Programs and the former Program Director, United Defense Limited Partnership (UDLP). Discussing the need for user

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juries, tiger teams, and subject matter experts who are MANPRINT-trained, the panel maintained MANPRINT must be at the System Engineering and Integration level, as well as on product teams. Additionally, there must be early management commitment to MANPRINT, and requirements must be resourced. A MANPRINT Working Integrated Product Team should prepare the System MANPRINT Management Plan to identify and track key issues. According to the UDLP team, applying MANPRINT practices has led to a projected $2.4 billion cost avoidance for CRUSADER.

The second panel presented an update on regulations. Marjorie Zelko, MANPRINT staff officer, Personnel Technologies Directorate, Office of the Deputy Chief of Staff for Personnel, HQDA, discussed the Draft Army Regulation 602-2, which addresses the MANPRINT program.[2] Her office handles policy oversight of MANPRINT for the Army.

Jim Inman, an Acquisition Policy Specialist, Office of the Assistant Secretary of the Army for Acquisition, Logistics & Technology, discussed Army Regulation (AR) 70-1[3] and Department of the Army Pamphlet 70-3.[4] AR 70-1 will either be replaced or changed, and it appears the Department of Defense Regulation 5000.2-R[5] will be rewritten and drive Service changes. DA Pamphlet 70-3,[6] which was approved July 15, mirrors the contents of DoD 5000.2-R. Inman emphasized MANPRINT must sell itself as providing "value added." Specifically, MANPRINT representatives on Integrated Product Teams must be empowered to offer recommendations to the PM that, when implemented, will result in improved systems being fielded.

The third panel addressed perspectives from military forces outside the United States. Representatives consisted of Philip Sutton from the United Kingdom; Andrew Vallerand, Canada; Manfred Roettle, Germany; and Col. Noam Kimmel, Israel Defense Forces. They discussed the history, scope, structure, and status of their MANPRINT-equivalent programs. A total of 10 foreign representatives attended the symposium. The U.S. Army MANPRINT program, as the first such effort, provides a benchmark to evaluate other similar programs.

The fourth and final panel discussed MANPRINT tools. Subject matter experts from the U.S. Army Research Laboratory, U. S. Army Total Army Personnel Command, and U.S. Army Safety Center, joined by representatives from the U.S. Army Center for Health Promotion and Preventive Medicine, and the Office of the Deputy Chief of Staff for Personnel, discussed tools used within their agencies. In many cases, the agencies

developed their own tools. Their presentations reinforced Dr. Keesee's conclusion that MANPRINT tools available need to be used now.

The Earlier the Better

The symposium concluded with Dr. Robert F. Holz, Acting Director, Personnel Technologies Directorate, Office of the Deputy Chief of Staff for Personnel, reminding the audience that resourcing is the key to a successful MANPRINT program. Additionally, Holz stressed the need for MANPRINT practitioners to work with the PM at the earliest possible stages of the acquisition process.

Since 70 percent of the decision costs for a new system are determined by the time a program reaches the end of Milestone I, such early involvement is essential for MANPRINT to positively impact DoD systems development.

Editor's Note: Feedback from the symposium was universally laudatory, with many respondents recommending that the Army continue an annual MANPRINT Symposium. The author welcomes questions or comments on this article. Contact him at **Robert.Holz@HQDA.Army.Mil**. For more information about MANPRINT, go to **http://www.manprint.army.mil/**.

References

1. *Requirements Determination* TRADOC Pamphlet 71-9 (TRADOC, Aug. 1, 1998
2. *Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process*, Draft Army Regulation 602-2 (Department of the Army, August 1999).
3. *Army Acquisition Policy*, AR 70-1 (Department of the Army, Dec. 15, 1997).
4. *Army Acquisition Procedures*, Army Pamphlet 70-3 (Department of the Army, Feb. 28, 1995).
5. *Mandatory Procedures for Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS) Acquisition Programs*, DoD Regulation 5000.2-R (OSD, March 1996).
6. *Army Acquisition Procedures*, DA Pamphlet 70-3 (Department of the Army, July 15, 1999).

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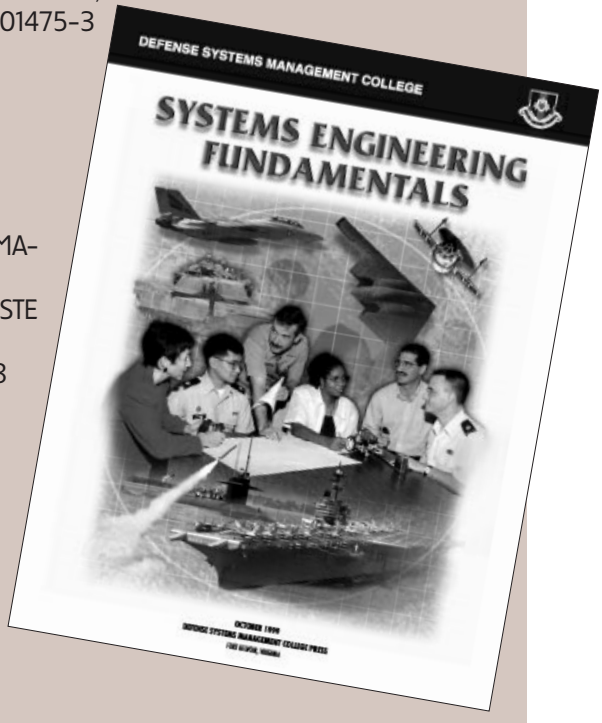

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